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December 1995

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**CATTLE MARKETS AND CAPTIVE SUPPLIES - OPPORTUNITIES
TO IMPROVE TRUE VALUE OF CATTLE**

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INTRODUCTION

Concentration in the packing industry has resulted in 5 major packers processing over 75 percent of the cattle on feed. During the last cattle cycle, total cattle numbers declined at the same time packers were increasing chain speeds and increasing individual plant volumes. From 1987 through 1992 the cow herd did not expand, therefore, supplies of fed cattle were consumed easily by existing packing facilities. All packers participated in the cash market to some extent, but in order to guarantee sufficient supplies of fed cattle in short supply situations, packers fed their own cattle, actively contracted cattle, and created marketing agreements priced on a formula basis. Price discovery of fed cattle became more difficult as more cattle were sold on contract or formula. The cash price is used in determining formula pricing but as the volume of cash cattle traded becomes smaller in relation to the volume of formula cattle, price reporting may become more unreliable.

Another trend which has evolved during the last cattle cycle is the practice of buying cattle on averages. Cattle of varying degrees of quality sell at basically one price. Average to below average cattle benefit from this practice, but high grading, high cutability cattle are less likely to receive full value. Consequently, the benefits of good breeding programs are masked by this process of selling on the average.

Much research has been done to establish the value differences of cutability. Yield grades have been used for many years to denote muscling. As consumer preferences for more lean and less fat grow, the value of cutability becomes more important.

Table 1 was compiled by Texas A&M. This table shows the value of yield grade differences with 1 inch, 1/2 inch, and 1/4 inch of outside fat trim. As more product is sold on a closely trimmed basis, the value of one full point of yield grade increases. For example, at one inch of trim, the value improvement of a yield grade 2 choice steer is \$2.52 per cwt of carcass over a yield grade 3 choice steer or approximately \$20.00 per head on an 800 pound carcass. When cut to 1/4 inch specifications, the value differences is \$3.88 per cwt of carcass or \$31.00 per head.

Table 1

Carcass Type	USDA Yield Grade	Subcutaneous Fat Trim Level					
		1 inch		1/2 inch		1/4 inch	
		Choice	Select	Choice	Select	Choice	Select
Beef Steers	2	112.88	108.2	114.74	109.94	117.12	111.06
	2.5	111.62	107.02	113.14	108.45	115.15	109.28
	3	110.36	105.84	111.54	106.96	113.24	107.49
	3.5	109.1	104.66	109.96	105.48	111.26	105.77
	4	107.84	103.49	108.36	104	109.33	103.92
Beef Heifers	2	114	109.15	115.61	110.65	118	111.72
	2.5	112.75	107.97	114.01	109.16	116.04	110.04
	3	111.5	106.8	112.42	107.68	114.04	108.24
	3.5	110.24	105.62	110.82	106.19	112.15	106.39
	4	108.97	104.44	109.23	104.71	110.17	104.69

In order to receive true value for each animal, cattle should be sold on a carcass merit basis. Table 2 represents a grid similar to one currently in use by some packers. Choice 3 carcasses represent the base price. Premiums and discounts are paid on a per cwt basis on all other boxes in the grid.

Currently the base price is established by using the packer's individual plant averages. For example, if the high paid by that packer for the week for 100% choice 3 carcasses is 107, then 107 becomes the base. This reflects what the packer is paying on the cash market. Large supplies of contract or formula cattle may lessen the need for cash cattle, therefore, cash prices are reduced which also reduces formula price levels.

A more equitable base pricing mechanism might be to use a 5 day average of USDA reported boxed beef prices. This report combined with drop credit values and processing costs could be negotiated and provide a base grid price. This base price would be more reflective of prices received by the packer.

Table 2

Quality Grade	Yield Grade				
	1	2	3	4	5
Prime					
Choice			Base		
Select					
Standard					
Out Cattle					
950					
D.C.					
Stags					
Hard Bones					
Lights					

Establishment of Base Price

1. Use USDA weighted average of choice boxes plus negotiated overage or discount

Example: 5 day average choice box = 105.60
 $105.60 + 0.00 = 105.60 \times 7.50 = 792.00$ per head

2. Use USDA average drop credits plus negotiated overage or discount

Example: Last week's drop credits averaged 8.50 per cwt live
 $8.50 \times 1.00 = 8.50 \times 12 \text{ [cwt]} = 102.00$ per head

3. Use negotiated kill and fab costs

Box value	792.00 per head
Drop credits	102.00 per head
Total	894.00 per head
Less kill & fab	-90.00
Total value	804.00 per head
Base value =	$804.00 \div 750 \text{ pound carcass} = 107.20$

Table 3 illustrates the base price derived from box values which is 107. Premiums and discounts are negotiable. The rest of the table would be reflective of prevailing market spreads. On this grid, choice yield grade carcasses would be worth \$109 per cwt. Select yield grade 4 carcasses would be worth \$86 per cwt. A dark cutting carcass would be worth \$77 per cwt. Carcass merit marketing means each individual carcass is priced.

Table 3

Quality Grade	Yield Grade				
	1	2	3	4	5
Prime	7	5	3	-10	-15
Choice	4	2	107	-15	-20
Select	-2	-4	-6	-21	-26
Standard	-20	-20	-20	-26	-31
Out Cattle					
950	-15				
D.C.	-30				
Stags	-30				
Hard Bones	-30				
Lights	-15				

The grid based marketing system makes comparison of groups of cattle more meaningful and can send strong market signals to the cow calf operator. Table 4 illustrates 3 groups of cattle. When sold on the average, these 3 groups may bring the same price or vary \$1.00 per cwt live. In this example, group 2 is worth \$67.25 live or \$4.13 per cwt live weight more than the poorer quality cattle in group 3. If the 3 pens were sold on the average, the price paid would probably have been \$65.50 to \$66.00 which helps group 3 but penalizes group 1.

Table 4

	Example Comparison of 3 Groups of Cattle		
	Group1	Group 2	Group 3
	CH1 3%		
	CH2 35%	CH3 55%	CH3 45%
	CH3 32%	CH4 5%	CH4 5%
	SE1 5%	SE3 37%	SE2 10%
	SE2 25%	SD3 3%	SE3 25%
			SE4 5%
			SD2 7%
			DC 3%
Carcass Value	105.9	103.73	101
Yield	63.5	63.5	62.5
Live Price	67.25	65.87	63.12

Feeder cattle prices will be affected by carcass merit selling. An example of this can be shown in table 5. The 3 groups of cattle compared in table 4 have different values as 800 pound feeders. This table is not derived from actual close out information but is reflective of cost differences of varying quality feeders. When selling cattle on averages production costs usually favor better quality cattle. In this table that would account for a value difference as an 800 pound feeder of a maximum of \$3.25 per cwt. When carcass value is considered, the value difference increases to \$7.55 per cwt.

Table 5

	Feeder Value Comparison		
Finished Weight	1250	1250	1250
Hot Carcass Price	105.9	103.73	101
Yield	63.5	63.5	62.5
Live Price	67.25	65.87	63.12
Value per Head	840.63	823.38	789.00
Value Difference		-17.25	-34.38
Dry Feed Conversion	6.5	6.75	7
Feed Only Cost of Gain	46.48	48.26	50.05
Feed Cost Difference		-8.01	-16.07
Medicine Cost Difference			-5
Death Loss Cost Difference			-5
Value Difference per Head		-25.26	-60.45
Value Difference per cwt 800 pound feeder		-3.15	-7.55

Carcass merit marketing is necessary to expedite the search for genetic lines of cattle which provide high predictability for quality and cutability. Carcass merit marketing reduces packer risk and should improve the quality of his product. The Beef Quality Audit states that excess fat and defects cost the industry \$279 per head. Improvements in live animal and carcass scanning technology coupled with aggressive marketing programs with carcass premiums and discounts should result in a substantial reduction of that number. The end result can be lowered consumer costs at the meat counter and improved margins for the cattleman.